ABSTRAK

ISOLASI DAN KARAKTERISASI SENYAWA KAPSAISIN DARI CABAI RAWIT (*Capsicum frutescens* L.) VARIETAS CABAI RAWIT DOMBA

Cabai Rawit (*Capsicum frutescens* L.) merupakan tanaman rempah yang sangat bermanfaat, juga banyak ditemukan di lahan perkebunan di Indonesia. Karena persediaan banyak, ekstrak cabai rawit banyak diisolasi dan digunakan sebagai bahan baku pembuatan bahan kimia dan obat-obatan. Tujuan dari penelitian ini yaitu mengisolasi senyawa kapsaisin yang terdapat dalam buah cabai rawit. Cabai rawit diekstrak dengan metode soxhletasi menggunakan pelarut DCM. Kapsaisin kemudian dipisahkan dari oleoresin yang terdapat dalam ekstrak menggunakan n-heksana. Kapsaisin tersebut diendapkan sehingga menjadi kristal. Ekstrak cabai rawit berupa kristal kapsaisin yang didapat yaitu sebanyak 0,6 gram dari 200 gram cabai rawit kering, dengan persentase 0,3 %. Kristal tersebut memiliki titik leleh 68 °C dan nilai Rf = 0,54. Kristal tersebut kemudian dianalisis menggunakan FT-IR, dan terdeteksi mengandung gugus fungsi C−H *bending* (621, 723, 800, 1373 cm^{-1}), C−O−C *stretch* (1024, 1072, 1263 cm^{-1}), C=O *stretch* (1165, 1654, 1722 cm^{-1}), C−O *stretch* (1024, 1072, 1263 cm^{-1}), N−H *bending* dan C−N *stretch* (1463 cm^{-1}), aromatik C=C *stretch* (1544 cm^{-1}), N−H *stretch* (3388 cm^{-1}), dan alifatik C−H *stretch* (2920, 2850 cm^{-1}).

Kata-kata kunci: cabai rawit; soxhletasi; oleoresin; kapsaisin; FT-IR.

ABSTRACT

ISOLATION AND CHARACTERIZATION OF CAPSAICIN COMPOUNDS FROM CHILI PEPPER (Capsicum frutescens L.) VARIETY OF SHEEP CHILI PEPPER

Chili pepper (Capsicum frutescens L.) is a spice plant that is very useful, and can be found in many places in Indonesia. Because of its availability, there are many innovation of chili peppers. Chili pepper can be isolated and used as raw material for making chemicals and drugs. The purpose of this study is to isolate the capsaicin compound which is present in chili pepper. Chili pepper was extracted by the soxhletation method using DCM solvents. Then capsaicin was separated from the oleoresin contained in the extract using n-hexane. The capsaicin was deposited so that it becomes crystal. The extract of chili pepper in the form of obtained capsaicin crystals is as much as 0.6 gras from 200 grams of dried chili pepper, with a percentage of 0.3%. the crystal has has a melting point of 68 °C and the value of Rf is 0.54. The crystals were analyzed using FT-IR, and exhibited various characteristic of band which in turn confirmed the presence of C−H bending (621, 723, 800 cm^{-1}), C−O−C stretch (1024, 1072, 1263 cm^{-1}), C−N bending (1373 cm^{-1}), N−H bending and C−N stretch (1463 cm^{-1}), aromatic C=C stretch (1544 cm^{-1}), C=O stretch (1165, 1654, 1722 cm^{-1}), N−H stretch (3388 cm^{-1}), and alifatic C−H stretch (2920, 2850 cm^{-1})

Keywords: *chili pepper; soxhletation; oleoresin; capsaicin; FT-IR.*